

Chapter 4

Internal Control

4.1 INTERNAL CONTROLS-BASICS

Internal control Meaning (As per AAS- 6)	▪ The plan of organisation and ▪ all policies & procedures, ▪ adopted by management, ▪ to ensure, ▪ orderly & efficient conduct of business.				
Scope of Internal control system	(i) I.C system consists of <i>control environment and procedures</i>. (ii) I.C system extends beyond just accounting & finance. (iii) It seeks to ensure orderly conduct of business in all functional areas. (iv) However auditor is concerned mainly with those internal controls having direct bearing on accounting system.				
Objective of Internal controls regarding accounting system	(i) Proper execution of transaction as per management authorisation; (ii) Prompt recording of transaction: (a) in appropriate account (b) in proper period <i>i.e. to the accounting year to which it relates</i> (c) at correct amount (iii) Safeguarding of assets from unauthorised access, use or disposition, (iv) Periodic comparison of recorded assets with actual assets; & (v) Prevention, detection & correction of material misstatement on timely basis.				
Control Environment	<table border="1"> <tr> <td data-bbox="459 1211 639 1406"> Meaning </td><td data-bbox="651 1211 1522 1406"> ▪ Overall attitude ▪ awareness & ▪ actions of Management ▪ regarding I.C. system & its importance ▪ in the entity. </td></tr> <tr> <td colspan="2" data-bbox="459 1413 1522 1832"> Factors affecting control environment <pre> graph TD A[Factors affecting control environment] --> B[Organisational Structure] A --> C[Management supervision] A --> D[Personnel] </pre> Organisational Structure <i>1. Organisational Structure</i> (a) It should be such that no individual can override the I.C. System. (b) It should provide for segregation of incompatible function, so that misstatements can't be committed easily. (c) For example, authorisation for purchase, record keeping & access to assets are some functions regarding assets, which should be segregated. </td></tr> </table>	Meaning	▪ Overall attitude ▪ awareness & ▪ actions of Management ▪ regarding I.C. system & its importance ▪ in the entity.	Factors affecting control environment <pre> graph TD A[Factors affecting control environment] --> B[Organisational Structure] A --> C[Management supervision] A --> D[Personnel] </pre> Organisational Structure <i>1. Organisational Structure</i> (a) It should be such that no individual can override the I.C. System. (b) It should provide for segregation of incompatible function, so that misstatements can't be committed easily. (c) For example, authorisation for purchase, record keeping & access to assets are some functions regarding assets, which should be segregated.	
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Inherent Limitations of I.C.

V.IMP

2. Management Supervision	(a) Devising and maintaining I.C. System is responsibility of management. (b) Management should review it periodically to ensure its effectiveness. (c) Management can establish a separate department called "Internal audit" to check whether other internal controls are operating effectively. Note: Internal audit is a part of I.C. System itself, which dedicatedly ensures worthiness of internal control system.
3. Personnel	(a) Functioning of I.C. system depends on the capability & honesty of those operating it. (b) Thus, personnel should be properly qualified, trained and experienced.
Inherent Limitations-Meaning	Limitations which are inseparable from system of I.C.
Effect	▪ Due to Limitations of I.C. System, ▪ it can provide only reasonable, ▪ not absolute assurance, ▪ that its objectives are achieved.
What are Inherent Limitations of Internal control systems?	1. Cost Effectiveness ▪ Cost of implementation of control may be more than its benefits. ▪ Thus, management usually doesn't implement best controls.
	2. Human Error ▪ Human Error, which may occur while carrying out I.C. system. ▪ It may be due to misunderstanding on part of personnel.
	3. Collusion among employees ▪ Employees may commit fraud through collusion. ▪ It may be among themselves or with outsiders.
	4. Abuse of Authority ▪ The person responsible for exercising control can himself override it. ▪ Eg. :- Person responsible for issuance of stationery to various departments only for authorised use, can himself misappropriate stationery for his personal use.
	5. Manipulation by management ▪ Manipulation by high level management may not be detected by control system. ▪ E.g., Manipulation in estimates appearing in financial statements.
	6. Unusual Transaction ▪ Any unusual transaction may not be controlled. ▪ Because control procedures are generally made for usual transactions.
	7. Change in Conditions Established control procedures may become inadequate in a fast changing environment.

	Control Risk	Meaning as per AAS-6	- Internal Control system fails to. - Prevent or - Detect & correct. - Misstatements on timely basis.
		Reason	- Inherent limitations of internal controls. - Due to Which I.C. system fails to operate as desired.
Accounting & financial controls help in	(i) Specifying Authority to enter into transaction. (ii) Safeguarding of assets. (iii) Recording of Transaction in the account correctly. (iv) Fixing responsibility for work done. (v) Maintaining records in standardised way. (vi) Performing work in logical sequence. (vii) Minimizing losses. (viii) Ensuring compliance with Regulations having direct bearing on accounting. (ix) Preventing material misstatements. (x) Detecting & correcting material misstatements (xi) Preparation of periodical reports on timely basis. (xii) Ensuring adequate and timely financial reporting. (xiii) Segregation of accounting & custodial functions. (xiv) Establishing procedures in such a way so that single person can't have complete control over a transaction from starting to end. (xv) Providing for internal check, by which work of one person is reviewed by another. (xvi) Formulating cut-off procedures to separate transactions of two consecutive years. (xvii) Having proper documentation/ manual at every stage.		

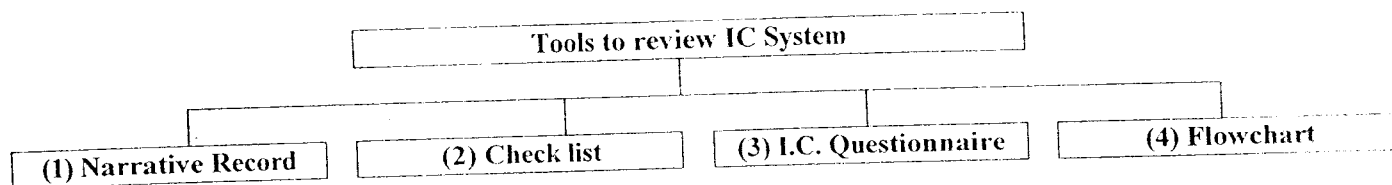
4.2 REVIEW OF I.C. BY AUDITOR

Review of I.C - Meaning	- Review of I.C. refers to, - Examination and evaluation of Internal control system of the client.
Need for review	To assure that I.C. system is adequate.
Role/Advantages of Review	It enables the auditor to ascertain whether (i) Internal control system is adequate & operating effectively. (ii) I.C. is able to prevent, detect & correct material misstatement. (iii) I.C. Properly safeguards the assets. (iv) I.C. ensures correct recording of transaction. (v) Reports & Certificate provided by management are reliable. (vi) I.C. are weak / excessive in a particular area. (vii) Effective internal audit department is in operation. (viii) Suggestions can be given to management to improve the I.C. system. (ix) Extensive Substantive procedures are required. (x) Audit procedures or techniques need to be changed from planned ones.

IC → Exist
 → operative
 → Effective
 → Its weaknesses
 → suggestion can be given for its improvement
 → NTF of audit

To ICs,	How the	1. Narrative Record	Meaning	- Complete & exhaustive detail of system - as found in operation by the auditor.
			Example	For stock control evaluation, it contains documents prepared, employees discharging various duties, various stages of stock movements etc.
			Advantages	(i) When properly framed formal I.C. system is not found, complete description is needed. (ii) Suitable for small business.
			Limitations	(i) Detailed observation is needed (time consuming). (ii) It doesn't readily identify weakness in system. (iii) Constant updating is needed if circumstances are changed.
		2. Check list	Meaning	- It contains series of questions, - to be answered by the audit staff.
		filled by audit staff	Example	"Are tenders invited before placing orders?" Now a member of audit staff checks the same & answer it ("yes", "No", "or" "Not Applicable"). After answering, he puts his initials.
			Advantage	(i) On the job requirement, thus motivating. (ii) Completed checklist is studied by the senior audit staff, thus weaknesses can't be overlooked. (iii) Easy location of weakness.
			Limitations	(i) Requires intelligence to prepare proper checklist. (ii) Time consuming. (iii) Client can manipulate when responding to questions raised by audit staff.
		3. I.C. Questionnaire	Meaning	- Comprehensive series of questions, - on each aspect of I.C., - Prepared by auditor & filled by the client's employees.
		filled by employees	Example	"Do you keep invoice pre- numbered?" Now client answers as "yes", "No" or "Not Applicable". Usually questions are framed in such a way that "no" shows weakness.
			Advantage	(i) Detailed questionnaire, thus no important aspect is overlooked. (ii) Weaknesses are easily located. (iii) Evaluating I.C system becomes Systematic & easy. (iv) Recommendations can be readily provided by auditor.
			Limitation	(i) Time consuming. (ii) Client may answer it in a hasty way. (iii) Client may manipulate the answers.

4. Flowchart	Meaning	▪ Graphic presentation. ▪ of each part of ▪ entity's internal control system.
	Example	Stock control procedure can be depicted in a form of diagram. The Auditor prepares it after proper study of I. C. System of client.
	Advantage	(i) Concise presentation. (ii) Easily understandable. (iii) Gives "birds eye view" of complete system
	Limitation	(i) Time consuming to prepare such a flowchart which is concise yet showing every important aspect of I.C. (ii) Weakness can't be readily located.



4.3 EXAMINATION IN DEPTH / WALK THROUGH TEST

Meaning	▪ Checking a few transactions, ▪ from the beginning to the end, ▪ through entire flow of transaction.
Example	If "receipt from debtor" regarding sale is to be checked in depth, following should be checked: (i) The order received from customer; (ii) The copy of sales invoice given to him by appropriate authority; (iii) The entry in stock register showing dispatch of goods; (iv) The statement of account given to him; (v) Duplicate copy of receipt issued to him; & (vi) Corresponding entry in his account as well as in cash Book.
Conclusion	(i) It enables the auditor to study recording of transaction at various stages. (ii) Auditor examines records & authorities at each stage. (iii) Thus, he is able to understand overall internal control over a specific item in an effective way.

4.4 INTERNAL CHECK

Meaning	▪ Check on day to day transactions, ▪ Operating continuously as part of routine system, ▪ Whereby work carried out by one person is automatically checked by another.
Objective	▪ To prevent fraud / error, & ▪ Early detection of fraud and error
Relation with I.C. System	Internal Check is part of overall Internal Control System & operates as a built in device.

Internal Check is a system of I.C. under which a work performed by one is automatically checked by another & no one has complete control

General Principles in Internal Control	1. Distribution of powers	Administrative & financial powers (Eg:- ordering product, issuing cheques etc) should be distributed among different personnel.
	2. No Independent control	A Single person should not have independent control over any important aspect of business.
	3. Custody-Records distribution	Persons having physical custody of assets should not have access to accounts or records.
	4. Check by another	All acts of one person should come under the review of another.
	5. Job Rotation	Duties of staff should be changed from time to time without previous notice.
	6. Leave	Every personnel should be encouraged to go on leave at least once in a year. Fraud done by employee can be detected easily when he is absent.
	7. Budgetary control	Budgets should be prepared for important activities. If difference between budgeted & actual figure is significant, it should be enquired into.
	8. Accounting Control	For each important asset, accounting control should also be periodically examined.
	9. Stock Control	During stock taking at end of accounting period, trading activities should be suspended, if possible.
	10. Cash Control	To prevent misappropriation of cash, mechanical devices (Eg:- automatic cash Register) can be employed.
	11. Updation of procedure	Timely review of procedures enables the management to change them, if need arises.

4.5 INTERNAL AUDIT

1. Meaning	▪ Internal audit is independent appraisal activity, ▪ within an organisation, ▪ for review of activities and ▪ providing suggestions for improvement there of.
2. Functions of Internal audit	(i) Review of accounting system & related I.C. (ii) Examination of financial & operating information for management. (iii) Examining operations of entity. (iv) Physical Examination & verification.
3. Objectives	Objectives of internal audit are to: (i) Check accuracy and authenticity of records presented to management. (ii) Ascertain that accounting policies are followed as per plans. (iii) Establish existence of authority for acquisition, use and disposition of asset. (iv) Confirm existence of Liabilities. (v) Analyse & improve internal check system. (vi) Facilitate prevention and detection of misstatements. (vii) Examine safeguarding of asset. (viii) Conduct special investigation for management. (ix) Provide new suggestion to management. (x) Review operation of overall Internal Control System.

4.6 AAS 6 - RISK ASSESSMENT AND INTERNAL CONTROLS

Accounting System	Meaning	Series of tasks and records of an entity by which transactions are processed as a means of maintaining final records.	
	Why auditor should understand it	To identify and understand the following at client's site- a. Classes of transactions; b. Manner of initiation of transaction; c. Significant accounting records, supporting documents and specific accounts in the financial statements; and d. The accounting and financial reporting process.	
Internal Control System	Meaning	It refers to all the policies and procedures adopted by the management of the entity.	
	Objectives	a. Conducting the business in an orderly and effective manner; b. Adherence to management policies; c. Safeguarding of assets; and d. Detection of fraud and error in a timely manner.	
	Component	Control Environment	It means the overall attitude, awareness and actions of the directors and management regarding the internal control system and its importance in the entity.
		Control Procedures	These are policies and procedures established in order to achieve entity's specific objectives .
Audit Risk	Meaning	Audit risk is the risk that the auditor may give an inappropriate opinion when the financial statements are materially misstated.	
	Component	Audit risk has three components, viz. inherent risk , control risk and detection risk.	
Inherent Risk	Meaning	Inherent risk is the susceptibility of an account balance or class of transaction to a material misstatement, assuming that there were no internal controls.	

FACTORS AFFECTING INHERENT RISK

At level of Financial Statement	At level of account balance & Transaction
1. Integrity of management.	1. Quality of Accounting System.
2. Management experience and knowledge.	2. Accounts prone to misstatement.
3. Unusual pressure on management.	3. Complex transaction.
4. Nature of entity's business.	4. Judgement involved in determining balances.
5. Factors affecting Industry.	5. Assets prone to misappropriation.
	6. Completion of unusual transaction at or near period end.
	7. Transaction not subjected to ordinary processing.

Control Risk

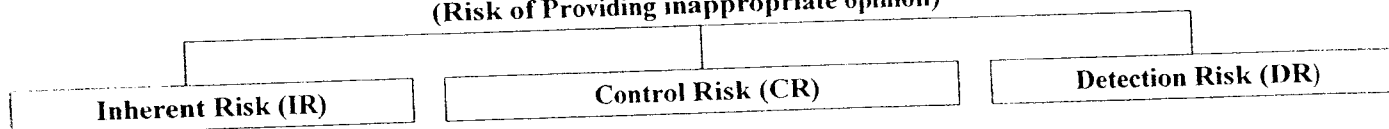
Meaning	Control risk is the risk that material misstatements will not be prevented or detected and corrected on a timely basis by the Internal Control System.	
Reason/Inherent Limitations of Internal Controls	a. Cost effectiveness; b. Transactions of unusual nature may be missed by most controls; c. Potential of human error; d. Circumvention of controls through collusion; e. Abuse of control by the person who is himself responsible for exercising it; f. Inadequacy of procedures due to changes in conditions; and g. Manipulations by management.	
Assessment of control risk	Preliminary Assessment of Control Risk	1. It refers to evaluating the likely effectiveness of an entity's internal control system in preventing or detecting and correcting material misstatements. 2. The auditor should obtain an understanding of internal controls to make a preliminary assessment of the control risk. 3. Thus, the auditor should assess the control risk as high unless the auditor: (a) Is able to identify internal controls which are likely to prevent or detect and correct a material misstatement; and (b) Plans to perform test of controls.
	Test Controls	Auditor performs Test of control to obtain audit evidence about the following- (a) Whether the accounting and internal control systems are suitably designed to prevent or detect and correct material misstatements; & (b) Operation of internal controls throughout the period.
	Final assessment of control risk	On the basis of the results of the test of controls, the auditor should evaluate whether the preliminary assessment of control risk was correct or need to be revised . He should accordingly determine any modification in the NTE of audit procedures.
Combined IR and CR	The auditor should make a combined assessment of the inherent and control risks. This is because the management generally reacts to inherent risk situations by designing suitable internal control system to prevent or detect and correct material misstatement.	

Detection Risk	Meaning	Detection risk is the risk that an auditor's substantive procedures will not detect a material misstatement.
	Relation with other risks	- There is an inverse relationship between detection risk and the combined level of inherent and control risks. - Thus, when inherent and control risks are high, acceptable detection risk should be low to reduce the overall audit risk to an acceptably low level. - However, the assessed levels of inherent and control risk cannot be sufficiently low to eliminate the need to perform substantive procedures.
	If detection risk Cant be reduced to acceptably low level	The auditor should express a qualified opinion or a disclaimer of opinion.
Internal Controls in a Small Business		- There may not be sufficient segregation of functions among a small number of persons who perform accounting procedures. - Thus, auditor should perform more substantive procedures to form his opinion regarding financial statements.
Communication of Weaknesses in Internal Controls		- Any material weakness in the internal control noticed by the auditor should be communicated in writing to the management in a timely manner. - However, he should mention in the communication that audit has not been conducted to determine the adequacy of internal controls.

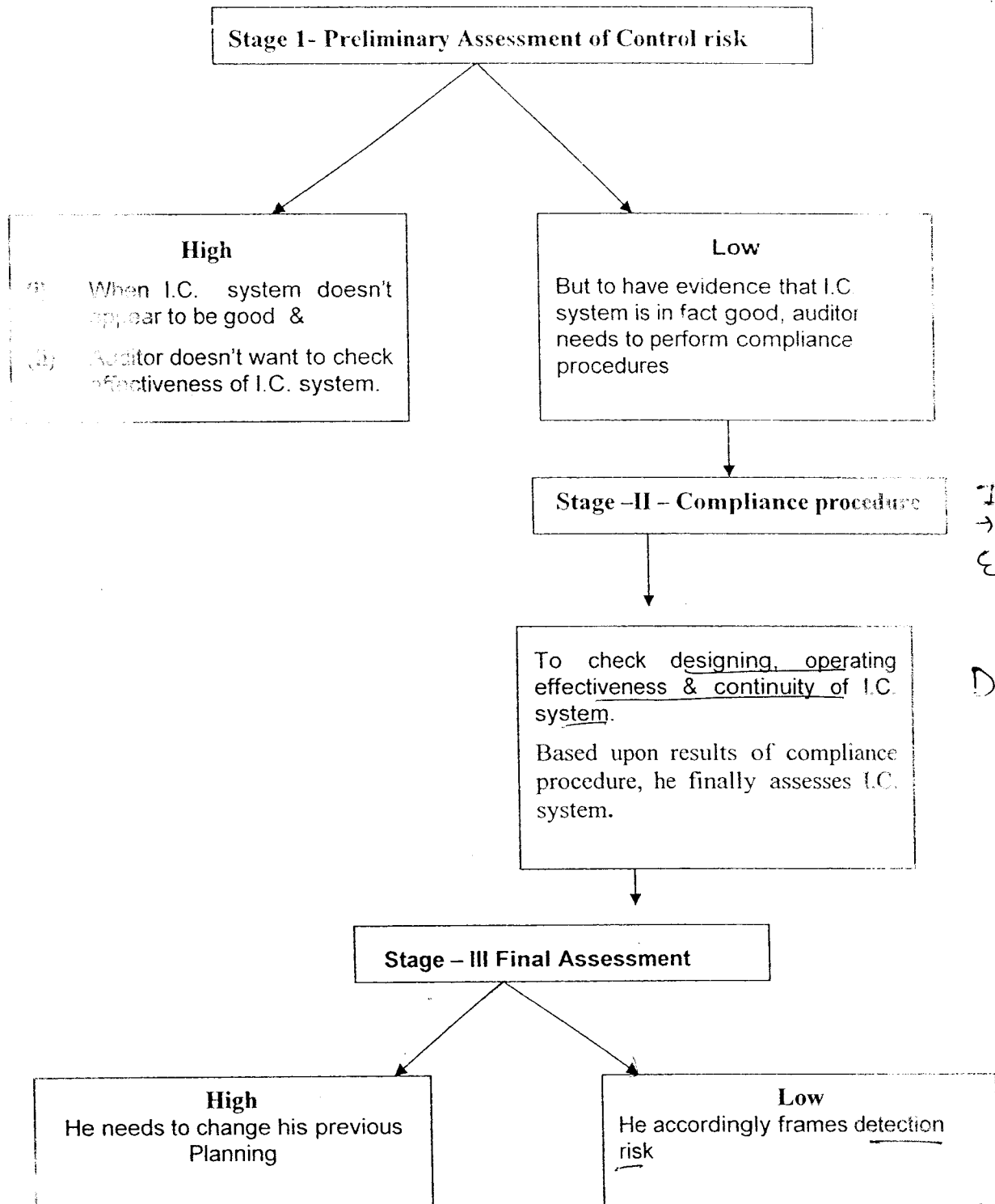
Audit Risk at a glance

AUDIT RISK

(Risk of Providing inappropriate opinion)



Inherent Risk(I.R)	Control Risk (C.R)	Detection Risk (D.R)
☞ Risk that Material Misstatements may occur.	☞ Risk that I.C. fail to operate as desired.	☞ Risk that auditor's substantive procedures will not detect a Material Misstatement.
Arises at level of management.	Arises at level of management.	Arises at auditor's level.
Auditor can only assess this risk.	Auditor can only assess this risk.	Auditor can frame this risk.
Risk of System of management.	Risk of I.C. System of management.	Risk of Substantive procedure adopted by auditor.
This is generally high. However certain factors may be present due to which it can be less than high.	This is <i>evaluated in stages</i> (See chart below).	DR should be inversely proportionate to combined assessment of I R & CR. $DR \propto 1/(IR+CR)$ If IR & CR are high, DR should be kept at low level.



IC
→ Control
Exist

Doc.

4.7 AAS 7 - RELYING UPON WORK OF INTERNAL AUDITOR

Steps and Objectives of Internal Audit Function	Meaning	- Internal audit is basically a part of I.C. system. - To check designing, operating effectiveness and continuity of other internal controls. <i>Doc</i>		
	It depends on	Size of organization and requirements of management.		
	Coverage	- Review of accounting and I.C. system. - Examine financial and operating information for management. - Physical verification.		
	<i>→ Material misstatement</i> <i>→ Timely detection of errors</i> Basic Difference		Internal audit	External audit
Relationship between Internal and External Auditors		Appointment	By Management.	By Members.
		Scope	By Management.	By Law, ICAI.
		Objective	To ensure Designing, operating effectiveness and continuity of I.C. System.	To express opinion on Financial Statement.
		How to use internal auditor's work	- External auditor should himself check I.C. (perform compliance procedures). He should <u>test</u> work of internal auditor on which he intends to rely. - He can determine his <u>NTE</u> based upon evaluation of internal audit function. - External auditor <u>alone is responsible</u> for his report (Reliance on internal auditor doesn't reduce it).	
Co-ordination	- External auditor should discuss with internal auditor his plan at early stage. - Meeting should be conducted at regular interval. - There should be sharing of information between external and internal auditor.			
General Evaluation of internal audit Function	Organisational Status	Whether internal auditor reports directly to top management and is dedicated only for the internal audit work.		
	Scope of Coverage	Enquire about nature and depth of coverage of internal auditor's work and check whether management considers his recommendations.		
	Technical Competence	Whether professionally trained persons are performing internal audit.		
	Due Professional Care	Whether Internal Auditor properly plans, supervise, review and document his work.		
Evaluating Specific internal audit work	Consider if: - Work of internal auditor is adequate for him. - Work of internal auditors has been properly <u>planned and supervised</u>. - Conclusions by internal auditor appear to be <u>appropriate</u>. - Inconsistency identified by internal auditor has been properly resolved by management.			
Conclusion	The statutory auditor may rely on Internal Auditor, provided he exercises due skill and care and there is nothing to doubt.			

→ General EDP Control → ^{System Control} Computers should be used by authorized person only, only for purposes.

→ Application EDP Control.

↳ Input should be authorized.

↳ Data accurate

↳ Acc transactions.

→ ^{Software's} Proper procedures in case of softwares acquiring

Chapter 5
E.D.P. Audit

5.1 INTERNAL CONTROLS IN EDP ENVIRONMENT

Types of I.C.

General I.C.

- (A) Overall controls affecting EDP environment (General EDP controls).
(B) Specific controls over specific applications (EDP Application Controls).

(a) Organization and Management Controls:—

- Designing policies and procedures relating to control functions.
- Segregation of incompatible functions.

(b) System Software Controls:—

- Restricted access of software to authorised personnel only.
- Authorization, approval, testing and implementation of new systems software.

(c) Application System Development and Maintenance Controls:—

- Restricted Access to system documentation.
- Changes to application systems should be authorised.
- Acquisition of application systems from third parties should be carefully planned
- Testing and implementation of new systems in a proper way.

(d) Computer Operation Controls:—

- Use of only authorized programs on computers.
- Only authorised personnel should use computer. ✓
- Systems should be used for authorised purpose. ✓
- Processing errors are detected and corrected on a timely basis. ✓

(e) Data Entry and Program Controls:—

- Restricted access to data and programs to authorised personnel only.
- Input should go through an authorization process.

EDP

Application Controls

Input - Output

(a) Controls over Input:— to check whether:

- Input is duly authorised. ✓
- Data input is accurate. ✓
- Transactions are not lost or altered. ✓
- Incorrect transactions are rejected or submitted after correction.

(b) Controls over Processing and computer data files:— to check whether:

- Processing errors are detected and corrected on a timely basis.
- Transactions are properly processed by the computers.

(c) Controls over Output:— to check whether:

- Results of processing are accurate. ✓
- Access to output is restricted to authorized personnel. ✓
- Output is provided to appropriate authorized personal on a timely basis.

5.2 INTERNAL CONTROLS IN SERVICE BUREAU

If some applications of the client are carried out at a service bureau, there should be a proper internal control system. This is required mainly because data moves outside client entity. In such cases, following should be considered:

- (a) There should be proper coordination between bureau and user. ✓
- (b) Proper testing of the system should be carried out. ✓
- (c) Proper file conversion checking procedures should be used by the user. ✓
- (d) There should be control over the physical movement of data. ✓
- (e) There should be control over the maintenance of master files. ✓
- (f) There should be control over output distribution to ensure that output is provided only to authorised personnel. ✓
- (g) There should be manual controls to verify the accuracy of computer processing. ✓
- (h) Appropriate rejection procedures should be adopted, in case data is found to be erroneous. ✓

5.3 TYPES OF EDP ACCOUNT SYSTEMS

Batch-processing systems

→ Slow
→ Data get accumulated
→ Time consuming
→ Simple

1. Transactions are accumulated and processed in groups.
2. Control totals (record count, financial total and hash totals) are derived to ensure complete and accurate processing.
3. 2 types of files are maintained: Master file and Batch file.
4. Updating doesn't take place as quickly as in On Line Real Time systems.
5. This is simple system, but now a day, it is rarely found due to availability of advanced and quick systems.

On line real time (OLRT) System

→ Fast
→ Data processed as and when transaction takes place
→ Audit trails are available

1. Transactions are entered and processed at the same time when they occur.
2. There is continuous updating of databases.
3. However, this is more complex than batch processing.
4. Ordinarily, they don't provide audit trail.
5. Thus, auditing in such systems requires special consideration by auditor.
6. For example, airline reservations and ATM's.

5.4 AUDIT TRAIL IN EDP ENVIRONMENT

Audit trail-meaning

- Audit trail means tracing a transaction from starting to end and vice versa.
- It is a situation where it is possible to relate the original input with the final output on 'one-to-one' basis.

Audit trail in EDP

Audit trail is generally not available in EDP environment due to following factors:

- (a) Direct data entry in to the system.
- (b) Direct posting of transactions to master file.
- (c) Elimination of reports because information is provided on-line.

How to compensate loss of audit trail

Auditor may use following to compensate the loss of audit trail:

- (a) CAAT
- (b) Programmed Interrogation facilities.
- (c) Arranging for special printouts containing additional information.

5.5 APPROACHES TO EDP AUDITING

Computer (Not as an Approach)	The auditor determines his audit procedures without considering the fact of use of computers for processing of information.
Computer (As an Approach)	Thus, computer is used just as a tool of the auditor to help him in performing audit. It means that auditor carries out the audit more-or-less in the same manner as in manual system except that instead of hand-written books of account, he examines computer printouts.
Through the Computer (Not as an approach)	The auditor can use audit around the computer when - - The system is simple and batch oriented and audit trail is available, or - The system uses generalized well-tested software. The primary advantage of this approach is simplicity. - Moreover, auditors having little technical knowledge of computers can be trained easily to perform the audit. - However, it is not suitable for complex systems.
Through the Computer (As an approach)	First of all, the auditor reviews the internal controls relating to EDP and on the basis of this evaluation determines the nature, timing and extent of his substantive procedures. Thus, computer is used as the target of audit. Auditor examines processing reliability and accuracy of the computer program. The auditor can use the computer to test:— - The logic and controls existing within the system, and - The records produced by the system. - It requires use of CAAT. - It is required due to: - Online data entry - Real time file updating - Reduction of printouts - However: - It may involve high costs. - There is need for extensive technical expertise.

5.6 COMPUTER ASSISTED AUDIT TECHNIQUES (CAAT) -TYPES

Audit Software	- These are computer programs used by auditor to process data from the entity's accounting system. - However, Auditor should use such programs only after he proves their validity for Audit purposes. - Audit Software may be of three types.
← Package Programs	- These are generalised Computer Programs, that perform data processing like selecting information and performing calculations etc. - These may be used at many client's site.
← Purpose Written Programs	- These are Computer Programs to perform Audit tasks in specific circumstances. - It may not be used at many clients site, thus cost effectiveness should be considered.
← Utility Programs	- These are programs for performing common data processing functions like sorting, creating and printing files. - These are not designed specifically for audit purpose.

Test Data	- The Auditor enters a set of test data into the entity's computer system and compares the results with predetermined results. - Test data are used to test specific characteristics in computer programs. - The test data are chosen by the Auditor.
Test packs	It involves testing a set of data, chosen by the auditor, in the entity's system, <i>separately</i> from the normal processing procedure.
Integrated Test Facility	Here, auditor establishes a dummy unit to which test transactions are posted <i>during</i> the normal processing cycle of the entity. However, later on, the dummy entries should be eliminated from the entity's accounting records. These are used mainly in case of On Line Real Time systems.

5.7 COMPUTER ASSISTED AUDIT TECHNIQUES (CAAT) –ADVANTAGES

1. Time saving	The auditor can check voluminous data in less time by using CAAT.
2. Sampling	Generally, audit software has embedded sampling routines. Thus, it is easy for the auditor to choose appropriate sample as per stated criteria.
3. Detailed examination	Exhaustive examination of client's system is possible by using these advanced techniques.
4. Testing internal controls	Various internal controls embedded within the system can be checked with help of CAAT. Manual audit procedures are not effective for this.
5. Analytical review procedures	CAAT's are very effective in performing ARP because the software can easily trace unusual fluctuations and hard copy can be generated for auditor's ready reference.
6. Compensate for loss of audit trail	Due to loss of audit trail in mostly EDP systems, manual audit procedures become impractical, making use of CAAT indispensable.
7. For OLRT systems	In case, client is using On Line Real Time systems, there is need to check systems itself. This is possible through ITF.

5.8 AAS 29 – AUDIT IN A COMPUTER INFORMATION SYSTEMS ENVIRONMENT

Computer information Systems (CIS)	- CIS environment is one where one or more computers are involved in the processing of accounts of client. - These computers may be operated by the entity or by a third party.
Factors to determine the effect of CIS environment on the audit	- The extent to which CIS environment is used to record and compile the accounting information. - Internal Control System in the entity w.r.t. flow of complete and correct data. - The availability of the audit trail in CIS.
Skill and competence needed in CIS environment	- The auditor should have sufficient knowledge of the CIS to plan, direct, supervise and review the work performed. - He should consider need for any specialised knowledge while conducting auditing. - In case, use of computer expert is planned, the auditor should consider AAS-9 "Using the work of an expert".

Main

- The CIS infrastructure (hardware, operating systems) and application software used by the client.
- Significance and complexity of CIS in each accounting application.
- Organizational structure of the client's CIS activities. Extent of centralisation and decentralisation of computer processing throughout the entity.
- Determination of availability of data.
- Potential for Computer Assisted Audit Techniques.

Notes on risks and the control checks in CIS systems

<i>Lack of transactions trails</i>	Some CIS may provide complete transaction trail, however some may not provide it (OLRT). If there is absence of trail, the risk will be high.
<i>Uniform processing of transactions</i>	Uniform processing of transaction can eliminate clerical errors which are there with manual processing. However, programming errors may occur.
<i>Lack of segregation of functions</i>	The extent of segregation of functions present in manual systems may not be there in CIS environment. Thus, an individual performing many computer related works may be in a position to perform incompatible function.
<i>Errors and irregularities in development, maintenance and execution of CIS</i>	The potential for human error in development, maintenance and execution of CIS may be greater than in manual system (due to technical incompetence).
<i>Automatic Initiation or execution of transaction</i>	CIS may initiate certain transactions automatically. The authorization of these transactions may not be documented (for Eg. – ERP).
<i>Dependence of other controls over computer processing</i>	Manual control procedure may also be used while implementing CIS.
<i>Potential for increased management supervision</i>	If management uses all the technologies & tools to review & supervise the CIS department of entity, the risk will be reduced.
<i>Potential for use of CAAT</i>	Due to peculiarities of some transaction and systems, auditor may be required to apply CAAT.

Ensuring the reliability of CIS

- These systems should:
- Provide authorized, correct and complete data to processing centre.
 - Provide for detection of errors on timely basis.
 - Have data recovery arrangement so that in case of interruption due to power, mechanical or processing failures, the system restarts without loss of entries or records.
 - Ensure that output is correct and complete.
 - Ensure that there is adequate data security against fire and other calamities, wrong processing and fraud, etc.
 - Ensure that amendments to the programs are properly authorised.
 - Ensure safe custody of the application software and the data files.